

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

Paper No. 55

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte TAKAHISA UEDA

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Appeal No. 2003-1780  
Application No. 08/581,050

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HEARD: JANUARY 6, 2004

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**MAILED**

**FEB 27 2004**

PAT. & T.M. OFFICE  
BOARD OF PATENT APPEALS  
AND INTERFERENCES

Before COHEN, FRANKFORT, and PATE, Administrative Patent Judges.

COHEN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection dated June 6, 2002 of claim 2 (Paper No. 46).<sup>1</sup> Claims 1, 3 through 11, 13, 14, and 16 through 31, the only other claims remaining in the

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<sup>1</sup> In an earlier appeal during the prosecution of the present application (Appeal No. 1998-2359), rejections of claim 2 under 35 U.S.C. § 103 were affirmed. Claim 2 that is now before us differs from the claim earlier reviewed.

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application, stand withdrawn from consideration by the examiner pursuant to 37 CFR 1.142(b).<sup>2</sup>

The invention on appeal pertains to a packing.<sup>3</sup> A basic understanding thereof can be derived from a reading of claim 2, a copy of which follows.

2. A packing, comprising

a plurality of internally reinforced yarns;

each of said internally reinforced yarns including a plurality of longitudinally arranged, spaced parallel reinforcing fiber yarns each having a surface which surface includes an adhesive, said internally reinforced braiding yarns being held together by expanded graphite integrally bonded to and surrounding said reinforcing fiber yarns with said adhesive, and

said plurality of said internally reinforced yarns being braided together to produce a packing string.

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<sup>2</sup> The claim status section of the brief (Paper No. 48, pages 1 and 2) omits withdrawn claims 30 and 31, as appropriately noted by the examiner in the answer (Paper No. 49, page 2).

<sup>3</sup> In the brief (page 2), we are informed by appellant that the claimed invention relates to the invention shown in Fig. 3 (elected species).

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As evidence of obviousness, the examiner has applied the documents specified below:

Schnitzler	4,190,257	Feb. 26, 1980
Ogino et al (Ogino)	4,455,334	Jun. 19, 1984
Case et al (Case)	4,559,862	Dec. 24, 1985
Ueda et al (Ueda)	5,134,030 (effective filing date Jun. 15, 1988)	Jul. 28, 1992

We have before us for review the following rejections.<sup>4</sup>

1. Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ueda in view of Ogino.
2. Claim 2 further stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Case in view of Schnitzler.

The full text of the above rejections and response to the argument presented by appellant is set forth in the answer (Paper No. 49), while appellant's argument is found in the brief (Paper No. 48). Appended to the brief are Enclosures A through D.

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<sup>4</sup> As set forth in the answer (page 3), final rejections based upon the first and second paragraphs of 35 U.S.C. § 112 have been withdrawn by the examiner.

OPINION

In making our determinations relative to the obviousness issues on appeal, we have carefully considered appellant's specification, drawings, and claim 2,<sup>5</sup> the applied patents,<sup>6</sup> and the respective points of view of appellant and the examiner. As a consequence of our review, we reach the conclusions which appear below.

Prior to addressing the art rejections, we focus upon certain language of broad claim 2, i.e., the recitations (a) "fiber yarns each having a surface which surface includes an adhesive" and (b) "said internally reinforced braiding yarns being held together by expanded graphite integrally bonded to and

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<sup>5</sup> The specification references 8 reinforced yarns for the Fig. 3 embodiment. However, inconsistent with the specification, Fig. 3 appears to show 9 yarns.

<sup>6</sup> In evaluating the applied patents, we have considered all of the disclosure of each document for what it would have fairly taught one of ordinary skill in the art. See In re Boe, 355 F.2d 961, 965, 148 USPQ 507, 510 (CCPA 1966). Additionally, this panel of the board has taken into account not only the specific teachings, but also the inferences which one skilled in the art would reasonably have been expected to draw from the disclosure. See In re Preda, 401 F.2d 825, 826, 159 USPQ 342, 344 (CCPA 1968).

surrounding said reinforcing fibers yarns with said adhesive." As to (a), we appreciate that a yarn surface is required, but the extent thereof is unspecified. With respect to (b), it is clear that graphite is required to surround the fiber yarns with adhesive, but the degree of actual bonding engagement or contact with the yarn and adhesive is unspecified. In light of the above understanding of claim language, we turn now to the rejections on appeal.

#### The first rejection

We sustain the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Ueda in view of Ogino.

In applying the test for obviousness,<sup>7</sup> we make the determination that the combined teachings of Ueda and Ogino would have been suggestive of the packing of claim 2. More particularly, it is the opinion of this panel of the Board that

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<sup>7</sup> The test for obviousness is what the combined teachings of references would have suggested to one of ordinary skill in the art. See In re Young, 927 F.2d 588, 591, 18 USPQ2d 1089, 1091 (Fed. Cir. 1991) and In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981).

it would have been obvious to one having ordinary skill in the art to modify the braided packing of Ueda (Figs. 7 and 8) by including therein known features in the art, as exemplified by the Ogino disclosure (column 3, lines 59 to column 4, line 3 and column 4, lines 25 through 32), i.e., by including a plurality of reinforcing fibers 2 in each of the braiding yarns (Fig. 7 of Ueda) and by including adhesive between the graphite sheets 1 of the laminate; the graphite sheets being made of expanded graphite, a graphite material commonly used in the packing art.<sup>8</sup> As we see it, the incentive on the part of one having ordinary skill in this art for making the proposed modifications would have simply been to apply known alternatives to the packing of Ueda to achieve the expected advantages thereof.

We are not persuaded by the arguments presented on pages 7 through 9 of the brief (Paper No. 48) that claim 2 patentably distinguishes over the collective teachings of Ueda and Ogino. While appellant argues (page 7) that a feature of the invention is "a plurality of fibers embedded in expanded graphite", we note

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<sup>8</sup> It is noted that the "Background of the Invention" section of appellant's specification (pages 1 through 3) reveals that expanded graphite is a well known packing material, and discusses a string or braided packing of expanded graphite.

that this limitation does not appear in claim 2. Additionally, appellant argues that Ueda lacks a proper fiber to meet the fiber yarn defined in claim 2 (page 7). We agree, but point out that the rejection under review is based upon obviousness, and not anticipation. For reasons articulated, supra, we additionally do not share the appellant's viewpoint (brief, page 7) that Ogino lacks the teaching needed to "reform" the fiber of Ueda. Like appellant (brief, pages 7 and 8), we do comprehend differences between the respective teachings of Ueda and Ogino, e.g., the braiding of Ueda. However, unlike appellant, we recognize that one having ordinary skill in this art would have appreciated a "common link" (appellant's term) therebetween, for reasons earlier explained. From our perspective, the circumstance that Ogino subsequently effects a mold packing does not detract from its explicit teaching (column 4, lines 25 through 28) of the basic knowledge in the art of unifying a composite or laminate with the use of a suitable adhesive, as an alternative to unifying by pressing contact. Thus, the application of adhesive would have been reasonably perceived as a known alternative expedient to unify components of a packing. Of course, it must be kept in mind that a packing, an article of manufacture, is being claimed, and not a method of manufacturing. Appellant's

assessment of the fiber reinforcement of Ueda as "external and not internal" (page 8), is not shared by us. Clearly, as seen in Figs. 7 and 8 of the reference, the fiber of Ueda is internal. Further, like the examiner, and contrary to appellant's point of view (pages 8 and 9), it is our position that the graphite of Ueda is in a surrounding relationship to fiber yarns, as now broadly claimed. The illustration in Enclosure D, referred to by appellant (page 9), supports our view that the surrounding limitation of broad claim 2 is addressed by the Ueda disclosure. Based upon the above, it should be clear that we do not share appellant's viewpoint that the rejection is founded upon hindsight (brief, page 8).

#### The second rejection

We sustain the rejection of claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Case in view of Schnitzler.

In the brief (page 9), appellant argues that the fibers 18 and 19 of Case are "not like the fibers 40 of claim 2, nor are



the strands 7 like the braiding yarns of claim 2", and Schnitzler cannot provide the structure of Case "with the necessary conformity so that they are alike."

In effect, the argument disputes that the references themselves would have been suggestive of the claimed invention. We disagree.

We readily perceive that one having ordinary skill in the art would have derived a suggestion from the applied teachings, collectively evaluated, to select expanded graphite as the specified graphite to be used in conjunction with a binder in the packing of Case (Fig. 1; column 6, lines 55 through 68). Clearly, the incentive on the part of one having ordinary skill in the art for relying upon expanded graphite would have simply been to gain the art recognized advantage thereof; this particular material being well known for packings, as revealed by the Schnitzler disclosure (column 1, lines 59 through 65, packing ring formed from corrugated ribbon or tape of flexible graphite exhibiting limited amount of lateral flow when compressed; column 1, lines 29 through 53, packing rings of compressed particles of

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flexible graphite). At this point, we simply note that other than the blanket assertion that the fibers and strands of Case are not like the fibers of claim 2 and that apparently Schnitzler cannot remedy the perceived deficiency, we are not presented with any specific basis in support of these broad arguments. For the foregoing reasons, we consider the examiner's determination that the packing of appellant's claim 2 would have been obvious to be sound.

In summary, this panel of the board has:

sustained the rejection of claim 2 rejected under 35 U.S.C. § 103 as being unpatentable over Ueda in view of Ogino; and

sustained the rejection of claim 2 under 35 U.S.C. § 103 as being unpatentable over Case in view of Schnitzler.

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The decision of the examiner is affirmed.

AFFIRMED



IRWIN CHARLES COHEN )  
Administrative Patent Judge )

  
CHARLES E. FRANKFORT )  
Administrative Patent Judge )

BOARD OF PATENT

  
WILLIAM F. PATE, III )  
Administrative Patent Judge )

APPEALS AND  
INTERFERENCES

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